*Marine Safety Investigation Unit*

Transport Malta

# SIMPLIFIED SAFETY INVESTIGATION REPORT

**201602/017** REPORT NO.: 03/2017 February 2017



## MV *VOLA 1*
**Serious injury to crew member while letting go the towline**
**In the port of Vlothaven, The Netherlands**
**05 February 2016**

### Course of events

*Vola 1* arrived at Amsterdam on 05 February 2016 to discharge 12,600 tonnes of sunflower seed. A Dutch pilot, assisted by two harbour tugs, conducted the navigation of the vessel into Vlothaven (Figure 1). There was light to gentle breeze and the visibility was good.

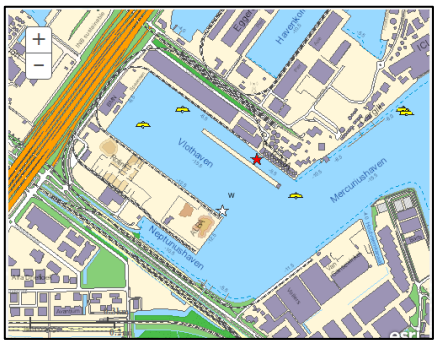


**Figure 1: Vlothaven, Amsterdam**

Shortly after the stern line was run ashore at 1730 (LT), the pilot instructed the ship's master to let go the aft tug. The aft tug was fast to a single bitt using the tug's line through the centre Panama fairlead. The master relayed the instructions to the second mate who was in charge of the aft mooring station. The other crew members manning the aft station were a fitter, a motorman and two able seamen (AB). All crew members were wearing their protective clothing, including safety helmet, safety shoes and gloves.

The tug's towline was slack. The messenger line attached to it was warped around the winch drum and held by AB 1. The second mate and AB 2 lifted the eye by hand (Figure 2).

**Figure 2: View of aft mooring deck showing simulated position of second mate and the AB 2**

Before the eye was set free from the bitt, the towline became taut. The pull on the towline was unforeseen and sudden. The left hand of AB 2 was drawn with the towline and trapped against the bitt. At the time of the accident, the fitter was on the winch control panel and the motorman was handling the stern line (Figure 3).

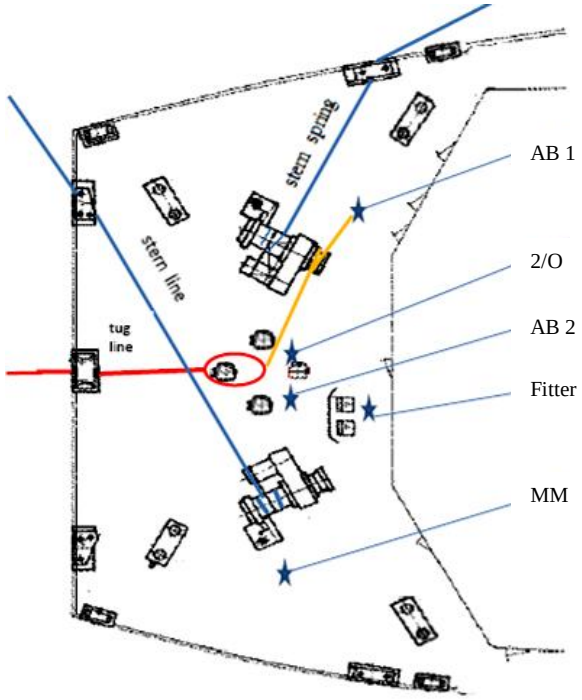


**Figure 3: Sketch showing approximate position of mooring crew**

## Medical response and injuries

AB 2, who was 36 years old, suffered severe crush injuries to his left hand and fingers. He was given medical first aid on board and transferred by ambulance to a local hospital for medical treatment. He was diagnosed with distal phalanx fractures of the second, third and fourth fingers.

## Mooring procedure and risk assessment

The 'Shipboard Safety Operations' documentation NMB 02/3/12 provided procedures on safe mooring practice. It was published in English and in the Bulgarian languages. The documentation included responsibility for mooring operations, mooring procedures, snap back zones and recommended arrangement of mooring lines. The formal assessment of risks on mooring operations and manoeuvring in port were addressed by the Company on 30 December 2015. The recommended controlling measures were in force at the time of accident.

Prior to arrival at Amsterdam on 05 February 2016, the master held a 'tool box' meeting with the crew. The vessel also carried a copy of the Code of Safe Working Practice for Merchant Seamen.

## Industry recommendations

The Maritime and Coastguard Agency's Marine Guidance Note 308 (M+F) recommends good communication between the tug and vessel to ensure that instructions on towlines are understood at all times to avoid unexpected loads.

The UK's Code of Safe Working Practices for Merchant Seafarers advises that it is not uncommon for the gear to become taut without warning and a number of accidents have occurred during the operation of making fast and releasing a tow. The Code recommends that before letting go, the vessel has to:

- establish positive communications with the tug's crew and ensure that the tug has indicated that it is ready to receive the tow back;
- use the tug's messenger line to heave in the slack and then stopper it off before taking the eye of the towline from the bollard; and
- take turns of the messenger line around the bollard to control the speed at which it is lowered and retrieved on board the tug; and
- make no attempt to handle towlines that have weight on them.

**Communication and control of towing operations**

All crew members on board were Bulgarian but the master communicated in English to the mooring crew members to prevent possible misinterpretation of instructions given by the pilot. However, it has been reported that much of the conversation between the pilot and the tugs' master was conducted in Flemish, despite master's request to change over to English. Confronted with this issue, the master forewarned the crew of the potential of an erroneous action.

Evidence submitted to the MSIU suggested ineffective exchange of information between the pilot and the master; to an extent that it necessitated the master to forewarn his crew members. The second mate did not establish direct communication with the tug. Moreover, his position on the mooring deck did not allow him to oversee the operations and signal the tug's crew. Instead, he had to rely on radio communication with the master.

The industry's recommendations to stopper off the towline before taking the eye from the bitt or taking turns of the messenger line around the bitt were not followed. Nonetheless, it has to be mentioned that in reality, there is an inherent risk because even by stopping off the towline, the crew members may be exposing themselves to other hazards. At the crucial moment of lifting the eye, the towline tensed. The master suggested that an unauthorised movement by the tug had strained the towline. However, no testamentary or electronic evidence from the pilot or the tug master was made available to corroborate the master's observations.

There is no doubt, however, that the extent of the injuries were the result of the towline coming under tension, whereas the second mate neither had an overall view nor control of the aft mooring operations. From the evidence available to the MSIU, the safety investigation believes that either the tug had momentarily moved, hence putting the line under tension, or else started heaving in the towline before the heaving signal was given by the ship.

**Previous accidents involving towlines**

Two accidents related to tug and mooring rope operations have been investigated by the MSIU in the past two years:

- *Mitrope*[1] – An able seaman had to undergo traumatic amputation of his left lower leg when the tug's messenger line tightened around his leg while releasing a towline in the port of Szczecin, Poland; and
- *CT Dublin*[2] – An able seaman lost his lower left leg as it became entangled in the tug's messenger line in the port of Vlaardingen, The Netherlands.

## SAFETY ACTIONS TAKEN DURING THE COURSE OF THE SAFETY INVESTIGATION[3]

Following the accident, the Company ensured that the accident was discussed at length and in detail during safety committee meetings on board and shore-based ISM seminars for officers.

## RECOMMENDATIONS

Navigation Maritime Bulgare is recommended to:

***03/2016_R1*** Review 'Shipboard Safety Operations' manual and include a procedure on towing operations, securing and letting go of tug's towline.

***03/2016_R2*** Review Company's formal risk assessment and identify control measures with respect to towing operations.

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[1] *Vide* Safety Investigation Report No. 21/2014.

[2] *Vide* Safety Investigation Report No. 01/2016.

[3] Safety actions and recommendations should not create a presumption of blame and / or liability.

**SHIP PARTICULARS**

| | |
|---|---|
| Vessel Name: | *Vola 1* |
| Flag: | Malta |
| Classification Society: | DNV GL |
| IMO Number: | 9044700 |
| Type: | Bulk carrier |
| Registered Owner: | Vola Maritime Ltd. |
| Managers: | Navigation Maritme Bulgare, Bulgaria |
| Construction: | Steel |
| Length Overall: | 168.575 m |
| Registered Length: | 159.99 m |
| Gross Tonnage: | 13851 |
| Minimum Safe Manning: | 15 |
| Authorised Cargo: | Dry bulk |

**VOYAGE PARTICULARS**

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|---|---|
| Port of Departure: | Nikolaev, Ukraine |
| Port of Arrival: | Amsterdam, The Netherlands |
| Type of Voyage: | International |
| Cargo Information: | 12600 tonnes of sunflower seed |
| Manning: | 18 |

**MARINE OCCURRENCE INFORMATION**

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|---|---|
| Date and Time: | 05 February 2016 at 1730 (LT) |
| Classification of Occurrence: | Serious Marine Casualty |
| Location of Occurrence: | Vlothaven, Amsterdam |
| Place on Board | Aft mooring deck |
| Injuries / Fatalities: | One serious injury |
| Damage / Environmental Impact: | None |
| Ship Operation: | Berthing |
| Voyage Segment: | Arrival |
| External & Internal Environment: | There was light to gentle breeze and calm sea. The visibility was good. The air temperature was 10 ºC. |
| Persons on board: | 18 |